Update on the California Solar Initiative

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California Public Utilities Commission

Energy Action Plan Meeting

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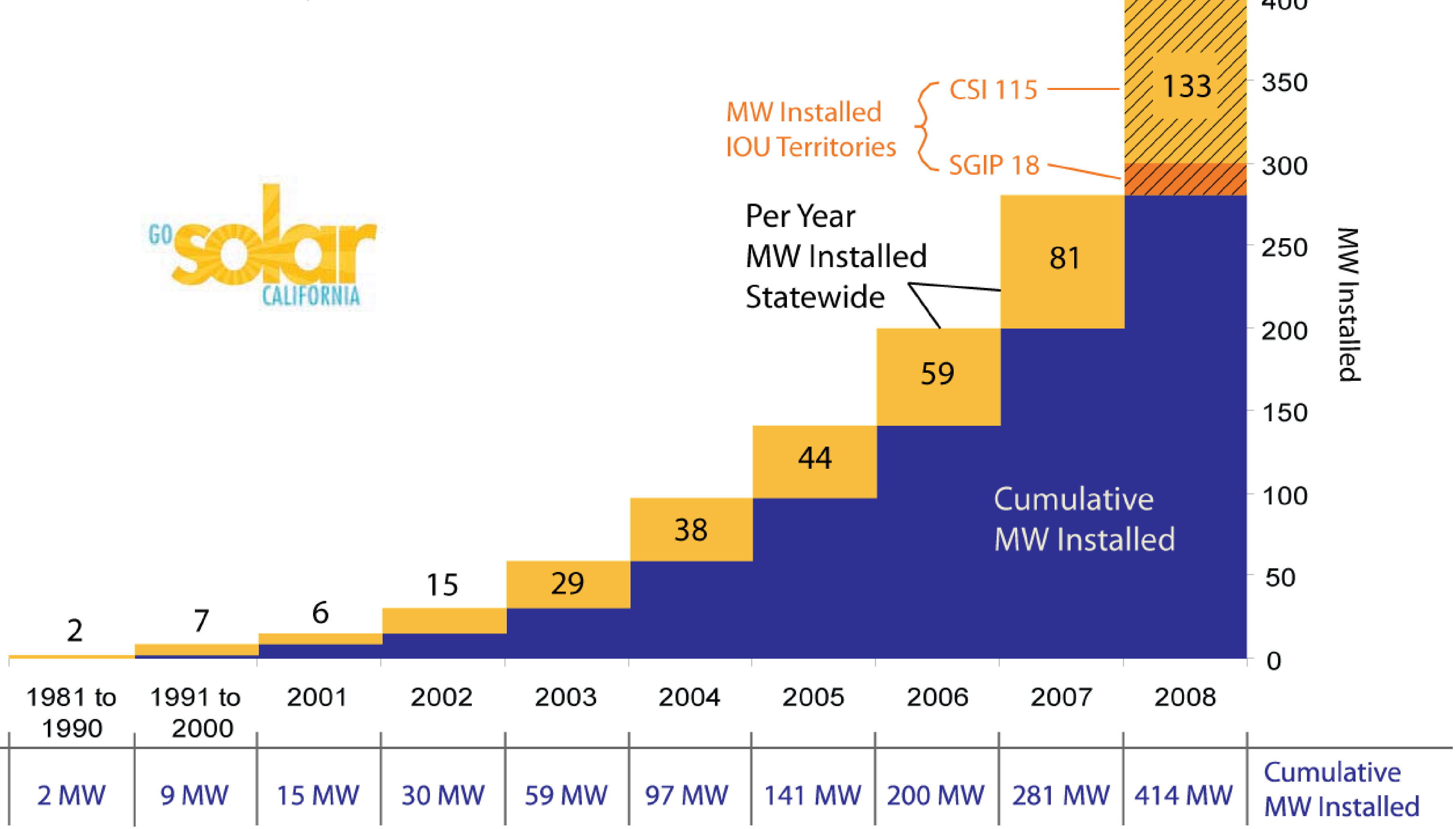
California Solar Initiative is going strong

- California has
  - 414 MW installed customer-side of the meter PV
  - Over 40,000 solar projects
  - Over 40 million square feet of solar installations
  - A solid policy foundation for sustained solar market growth
    - Incentives that reward performance and decline based on market demand
    - Net energy metering
    - Favorable interconnection policies
    - Rate structures that work with solar
- California's solar market has been growing at 40%+/ year.
  - In 2008, so far there is 64 percent growth
- Solar demand is continuing at record pace despite the downturn in the economy.
- California has more solar PV installed than any other state in the country.

California increased solar 600%+ from 2003-2008

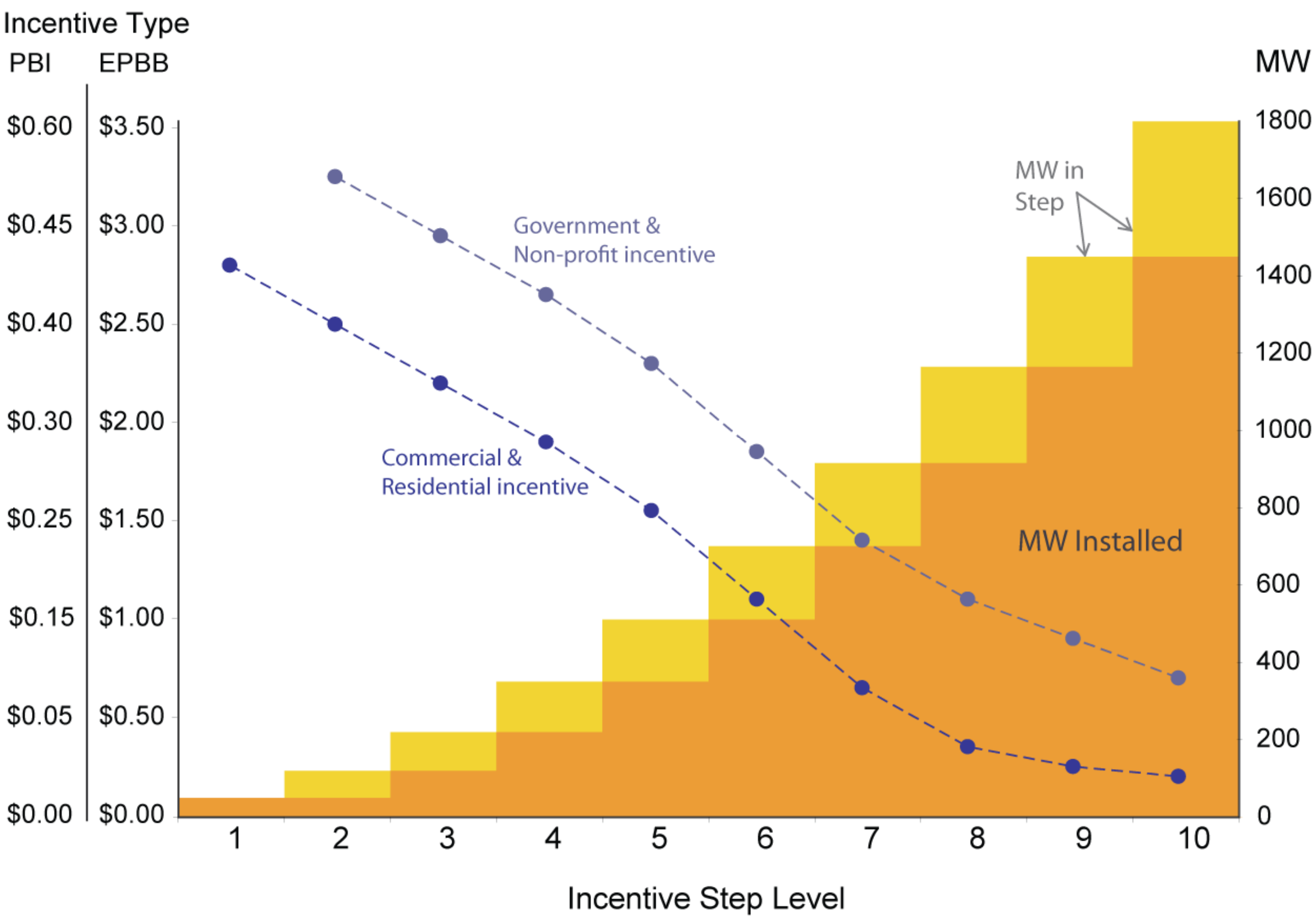
Source: 1981 - 2008 data from Energy Commission's *Grid Connected PV Capacity Installed in California* and CSI PowerClerk database Dec 3, 2008
Note: 2008 is partial year data



Launch of New Program on Jan 1, 2007

- CPUC portion of California Solar Initiative (CSI)
  - Offers incentives to all IOU-territory customers, except new homes
  - Has a goal of 1,940 MW by the end of 2016
    - 15%+ now installed or planned
  - Has a budget of $2.167 billion over 10 years
- Program Components
  - General market program – incentives based on performance
  - Low Income Programs
    - Single-Family homes
    - Multifamily homes – Multifamily Affordable Solar Housing (MASH)
  - Research and Development (RD&D) Program
- Start-up issues resolved
- Continuing to streamline and improve General market program and rolling out all other program components

Incentives decline as demand grows



PBI: Performance Based Incentive, paid over 5 years, in $ / kWh
EPBB: Expected Performance Based Buydown, paid upfront, in $ / W

2008 Progress

- Installed over 133 MW in IOU areas through December 3rd
  - 8,700 different sites throughout California
  - Projects represent a $1.5 billion investment in solar in the California economy
- 150 MW of additional identified projects expected online in next 12-18 months
  - Additional projects will be an additional $2.5 billion investment in the state's economy.

(And we’re not done yet…)

Total Capacity of CSI Applications, by Program Administrator

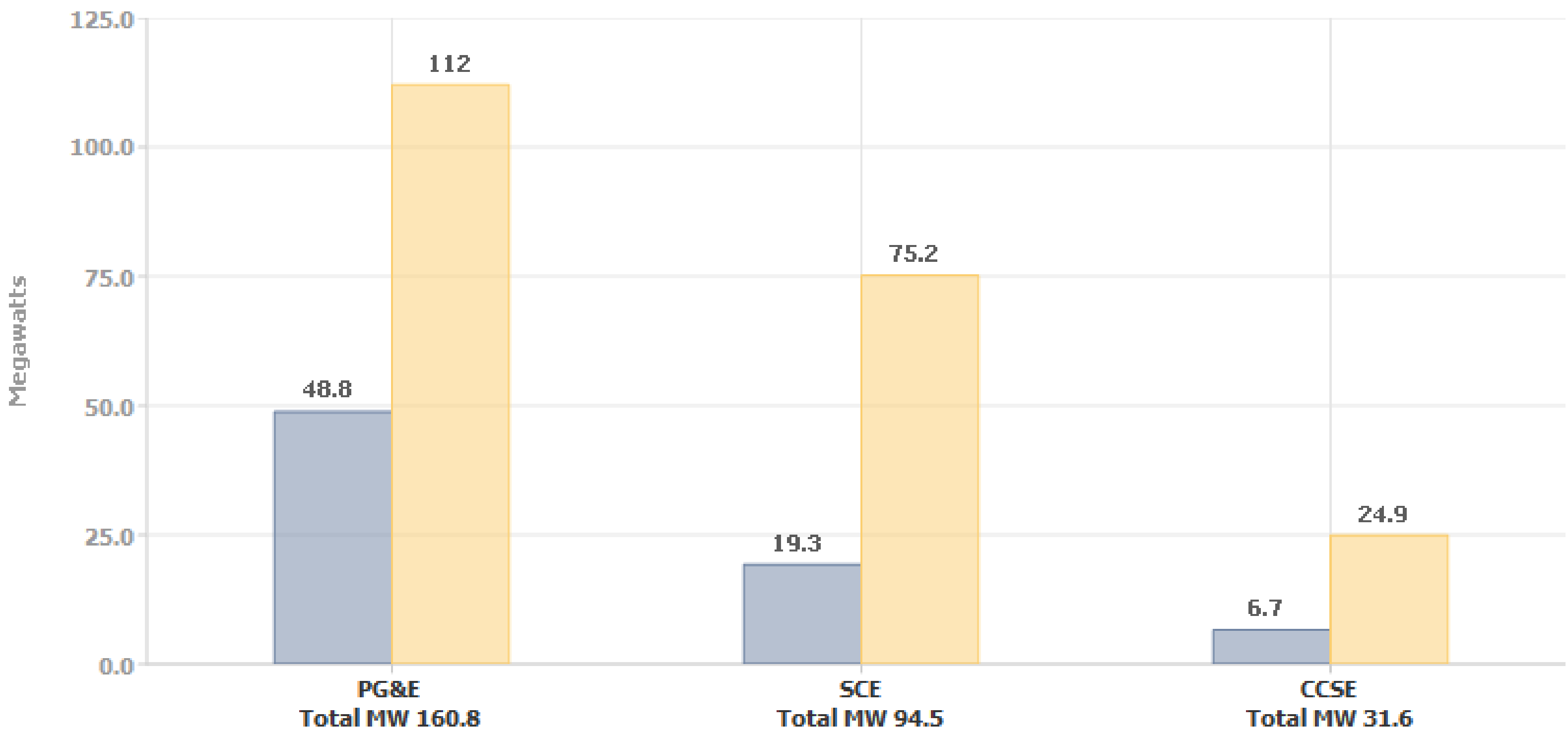
January 01, 2007 - December 03, 2008

Total Residential MW = 74.8 Total Non-Residential MW = 212.1

Key

Residential

Non-Residential

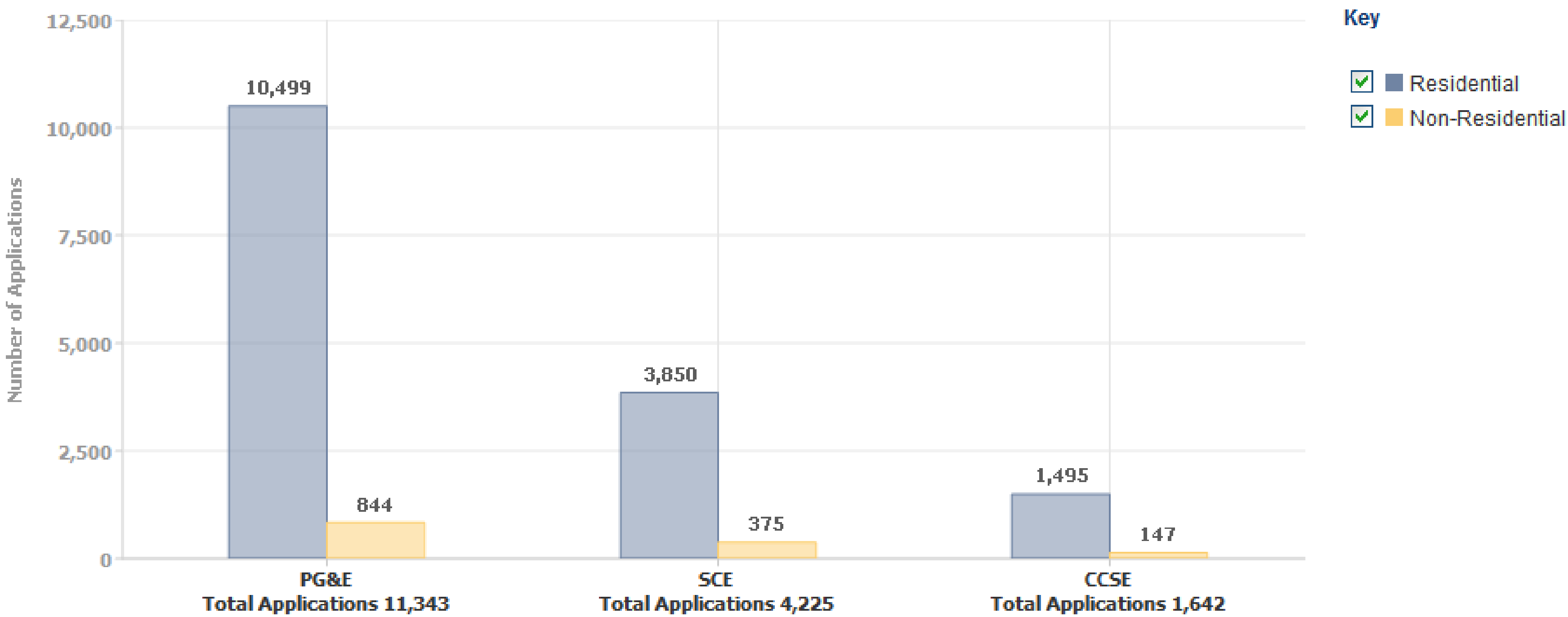


Source: www.CaliforniaSolarStatistics.ca.gov, December 3, 2008

Total Number of CSI Applications, by Program Administrator

January 01, 2007 - December 03, 2008

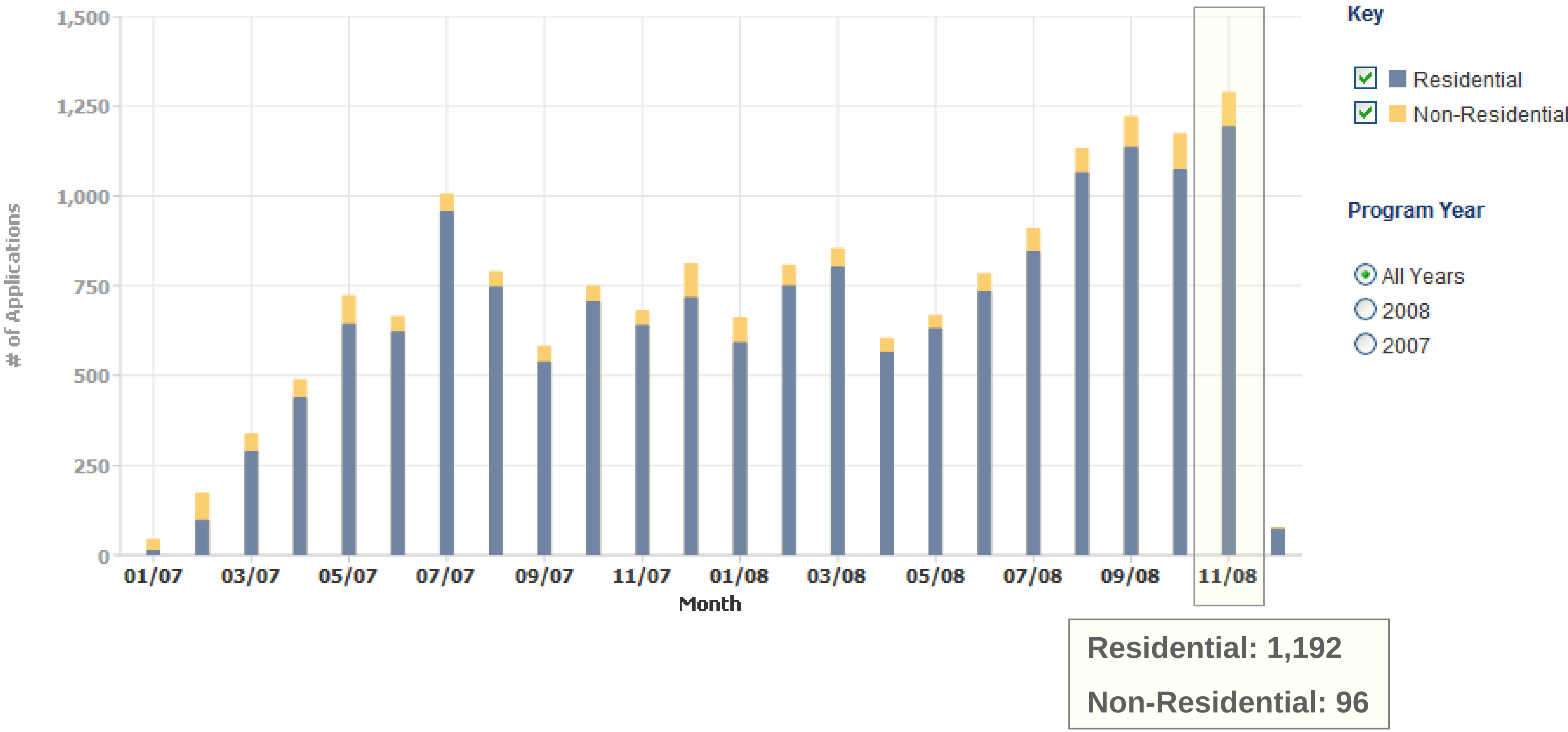
Total Residential Applications = 15,844 Total Non-Residential Applications = 1,366



Source: www.CaliforniaSolarStatistics.ca.gov, December 3, 2008

Total Applications - By Customer Segment

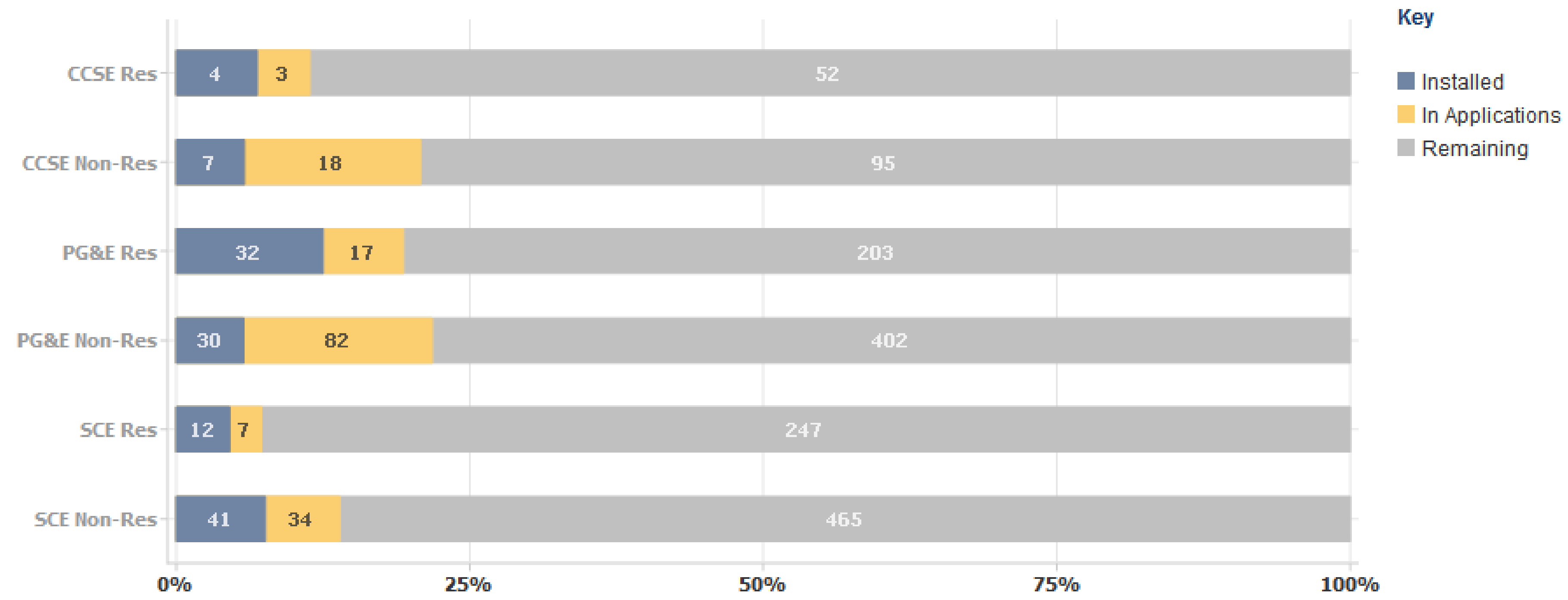
January 01, 2007 - December 03, 2008



Source: www.CaliforniaSolarStatistics.ca.gov, December 3, 2008

CPUC Progress Towards 1,750 MW Goal (MW)

January 01, 2007 - December 03, 2008



Source: www.CaliforniaSolarStatistics.ca.gov, December 3, 2008


Investment Tax Credit is Huge News for CA

- In October, Federal Government's Economic Stimulus Package expanded ITC for residential solar installs
  - Allows utilities to take 30 percent ITC
  - Lifted residential cap on ITC
    - Previously capped at $2000 per system
    - Now 30% of total system cost
- California's established PV market will quickly reap benefits
  - California is more than 55% of U.S. PV market
  - California has seen record CSI rebate demand despite downturn in the economy

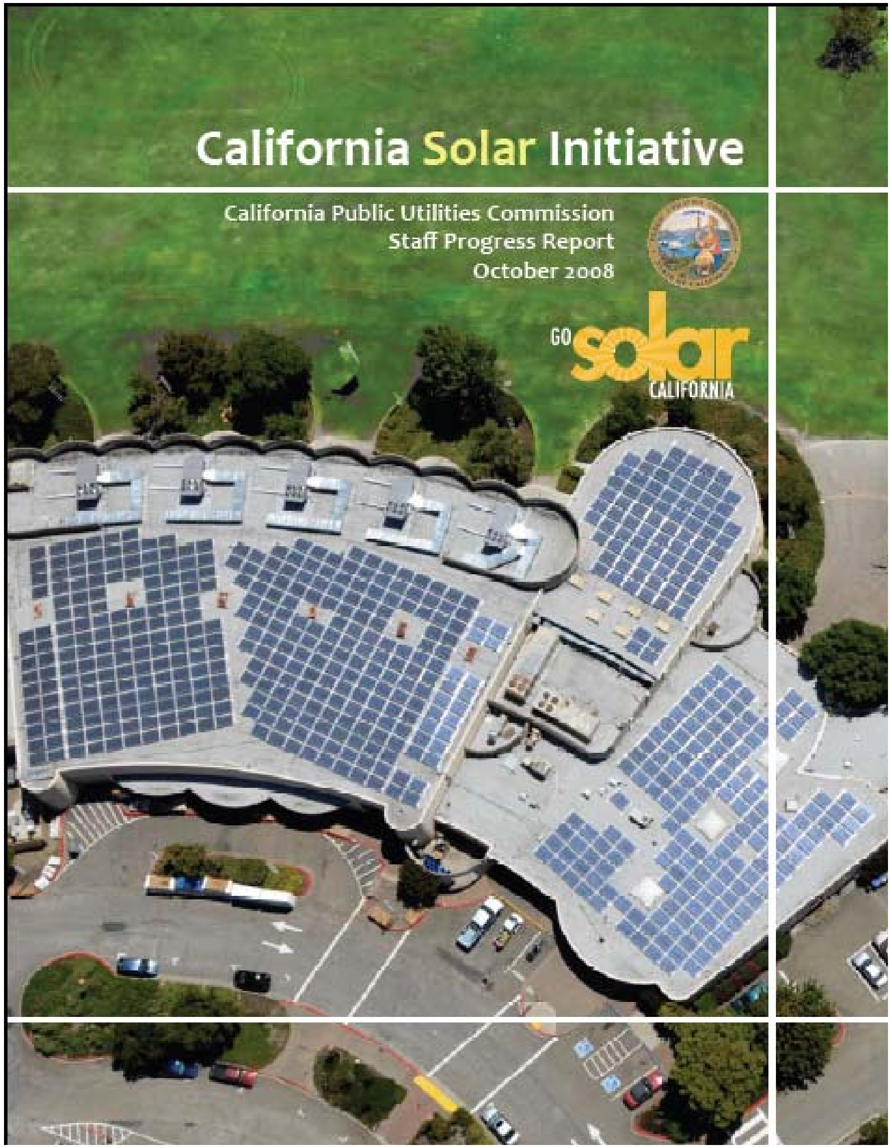
Rapid Changes in World PV Markets Expected

- California's PV market outlook is heavily dependent on world PV market
- California is fourth largest PV market in world
  - CA has 4% of world's installed PV capacity
    - US overall - 7%
    - Japan – 10%
    - Spain – 23%
    - Germany – 52%
- Analysts are predicting…
  - Increases in global PV manufacturing supply
  - Significant changes in supply/demand dynamics due to European policy shifts (especially Spain)
  - Downward shifts in PV pricing in 2009, even small changes could have big demand effect
  - Steady CA market growth due to good/improving economics of solar and sustained policy drivers

CSI in 2009 and beyond

- Regulatory To Do List
  - Review ITC impact on rebate levels
  - Propose and Consider Solar Hot Water, Cost Benefit Methodology, and Marketing and Outreach plans
  - Deliver Annual Report to legislature, increase real time reporting, and publish evaluation reports
  - Continue program rollout for low income and R&D programs
- Issues for the future
  - Net energy metering caps
  - PV in non-customer side of meter market segments
  - Integration of storage with solar
  - Begin planning for post CSI world, maintaining standards without rebate requirements
  - Integrate solar market penetration expectations into utility planning
    - T&D planning and system benefits
    - Long term resource planning
    - Understand potential for massive market disruption

Conclusion


California Solar Initiative
California Public Utilities Commission
Staff Progress Report
October 2008
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Back Up Slide: Data on World PV Market

	Installed 2007 (MWp)	Cumulative (MWp)	% of Total 2007	% of Total Cumulative
World	2,130	7,178		
Germany	1,100	3,827	51.64%	53.32%
Japan	208.8	1829	9.80%	25.48%
Spain	490	625.2	23.00%	8.71%
U.S. (incl. CA)	151.5	505.5	7.11%	7.04%
California (CEC-AC)	***81***	***281***	***3.80%***	***3.91%***
Italy	69.9	107.1	3.28%	1.49%
South Korea	42.87	71.66	2.01%	1.00%
Rest of World	66.67	213.2	3.13%	2.97%

Sources: IEA, CEC